



Saturday, July 17

3695 Gingivitis Reduction from a Power Toothbrush with Novel Brush Head

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Objectives: This clinical study was conducted to evaluate the effect of an oscillation-rotation power brush with novel brush head design on reduction of gingivitis and plaque over a 4-week period. **Methods:** This was a randomized, parallel, examiner-blind, 4-week clinical trial comparing gingivitis and plaque outcomes. The study population included 118 subjects with evidence of gingivitis and plaque. Subjects were randomly assigned to power brush (Oral B® Vitality™ non timer version with new Precision Clean brush head) or manual brush group (ADA). Both groups used standard fluoridated toothpaste (Crest® Cavity Protection). Treatment was twice daily at-home. Gingivitis was evaluated at Baseline and week 4 using the Modified Gingival Index (MGI) and Gingival Bleeding Index (GBI) and plaque was measured using the Rustogi Modification of the Navy Plaque Index (RMNPI). Statistical analyses were carried out using an analysis of covariance. **Results:** The average Baseline whole mouth MGI score was 2.047 for the ADA and 2.036 for the power group which were not statistically different ($p=0.258$) from each other. The average Baseline whole mouth RMNPI scores were 0.616 and 0.620 for ADA and power brush group, respectively ($p=0.517$). Groups were also balanced for age, gender, ethnicity and smoking status ($p\geq 0.094$). At Week 4 the power brush group showed a 19.8% reduction in gingivitis (MGI), 85.2% in bleeding and 57.9% in plaque (RMNPI), differing significantly ($p<0.001$) from baseline. ADA group had a 6.6% reduction in gingivitis (MGI), 55.9% in bleeding and 20.8% in plaque (RMNPI), differing significantly ($p<0.001$) from baseline. Between-group comparisons showed that groups differed significantly ($p<0.001$) on gingivitis (by almost 3 times), bleeding and plaque (by 2 times) at week 4, favoring the power brush. **Conclusions:** **The oscillation-rotation power brush with novel brush head design provided significant improvements in gingivitis and plaque as compared to a standard manual brush.**

Thursday, July 15

1421 Anti-Erosion Properties of a Stannous Containing Sodium Fluoride Dentifrice

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Objectives: To determine if an experimental stannous containing sodium fluoride dentifrice provides greater enamel protection to erosion than a conventional dentifrice in a 15 day in situ model. **Methods:** A single, centre, double blind, randomized, supervised, two-treatment crossover study was undertaken. 35 subjects were recruited to a 4 period in situ study (15 days/period), receiving 1 of 2 dentifrice products each period, an experimental stannous containing sodium fluoride paste or a conventional sodium fluoride and potassium nitrate paste. Subjects wore an intra-oral appliance retaining 2 polished human enamel samples for 6 hours/day, swishing with a slurry of one of the dentifrices twice a day and swishing with 250ml of orange juice for 10 minutes once/day. Enamel samples were baselined with contact profilometry and measured at days 5 and 15 for surface changes. **Results:** 2 measurements for each sample were recorded at baseline, day 5 and day 15, and the average result minused from baseline readings. No treatment differences were observed at baseline ($p>0.85$) with means of 0.150 and 0.146 for the conventional and experimental dentifrices, respectively. At day 5 the stannous containing sodium fluoride dentifrice demonstrated a 25% lower enamel loss than the conventional dentifrice ($p=0.0169$) with means of 1.37 μm and 1.83 μm , respectively, and at day 15, a 38% lower enamel loss ($p<0.0001$) with means of 2.03 μm and 3.30 μm , respectively. There were 3 adverse events. **Conclusion:** **The experimental stannous based dentifrice demonstrated significantly greater protection relative to the conventional fluoride based dentifrice against an erosive challenge to human enamel in the in situ clinical model.** (This study was funded by Procter & Gamble).